



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. 00-713-il2)

In the Application of:

Mirkin *et al.*

Examiner: J. Riley

Serial No. 09/975,376

Group Art Unit: 1656

Filed: October 11, 2001

For: Nanoparticles Having Oligonucleotides  
Attached Thereto and Uses Therefor

Confirmation No.: 9821

U.S. Patent and Trademark Office  
Box Sequence, P.O. Box 2327  
Arlington, VA 22202

Sir:

## TRANSMITTAL LETTER

In regard to the above identified application:

1. We are transmitting herewith the attached
  - a. Response to Notice to Comply dated April 22, 2002
  - b. Copy of the Notice to Comply
  - c. Substitute Sequence Listing (paper copy and computer readable form on 3.5" diskette)
  - d. Return Receipt Postcard
2. With respect to additional fees:  
☒ A. No additional fee is required.  
☐ B. Attached is a check in the amount of \$\_\_\_\_\_.
3. General Authorization: Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.
4. CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: U.S. Patent and Trademark Office Box Sequence, P.O. Box 2327 Arlington, VA 22202 on this 1 day of May, 2002.

Date: May 1, 2002By Emily Miao  
Emily Miao  
Reg. No. 35,285



## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/975,376	10/11/2001	Chad A. Mirkin	00-713-i12

CONFIRMATION NO. 9821

## FORMALITIES LETTER



\*OC000000007920067\*

Emily Miao  
McDonnell Boehnen Hulbert & Berghoff  
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Chicago, IL 60606

Date Mailed: 04/22/2002

### NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

For questions regarding compliance to these requirements, please contact:

- For Rules Interpretation, call (703) 308-4216
- To Purchase PatentIn Software, call (703) 306-2600
- For PatentIn Software Program Help, call (703) 306-4119 or e-mail at [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or [patin3help@uspto.gov](mailto:patin3help@uspto.gov)

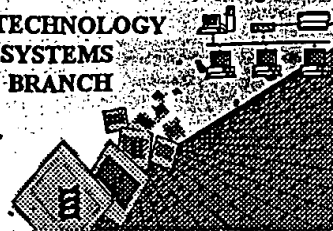
*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center  
Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



BIOTECHNOLOGY  
SYSTEMS  
BRANCH



16576  
0590  
03/9

## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/975,376  
Source: 1656  
Date Processed by STIC: 3-4-2002

RECEIVED  
MAR 19 2002  
TECH CENTER 1600/2900

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
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<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
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Revised 01/29/2002



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## Raw Sequence Listing Error Summary.

**ERROR DETECTED      SUGGESTED CORRECTION**SERIAL NUMBER: 09/975, 376

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1      Wrapped Nucleics      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file  
    Wrapped Aminos      was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will  
                                prevent "wrapping."
- 2      Invalid Line Length      The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3      Misaligned Amino      The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers;  
    Numbering      use space characters, instead.
- 4      Non-ASCII      The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please  
                                ensure your subsequent submission is saved in ASCII text.
- 5      Variable Length      Sequence(s)          contain n's or Xaa's representing more than one residue. Per Sequence Rules,  
                                each n or Xaa can only represent a single residue. Please present the maximum number of each  
                                residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6      PatentIn 2.0      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid  
    "bug"      sequences(s)         . Normally, PatentIn would automatically generate this section from the  
                                previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to  
                                the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for  
                                Artificial or Unknown sequences.
- 7      Skipped Sequences      Sequence(s)          missing. If intentional, please insert the following lines for each skipped sequence:  
    (OLD RULES)      (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
                                (i)      SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
                                (xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
                                This sequence is intentionally skipped  
  
                                Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8      Skipped Sequences      Sequence(s)          missing. If intentional, please insert the following lines for each skipped sequence.  
    (NEW RULES)      <210> sequence id number  
                                <400> sequence id number  
                                000
- 9      ✓ Use of n's or Xaa's      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
    (NEW RULES)      Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
                                In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10      Invalid <213>      Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or  
    Response      scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or  
                                is Artificial Sequence
- 11      Use of <220>      Sequence(s)          missing the <220> "Feature" and associated numeric identifiers and responses.  
                                Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or  
                                "Unknown." Please explain source of genetic material in <220> to <223> section.  
                                (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12      PatentIn 2.0      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file,  
    "bug"      resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence  
                                listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.



1656

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/975,376

DATE: 03/04/2002

TIME: 14:54:56

Input Set : A:\00-713-i12seq list.txt

Output Set: N:\CRF3\03042002\I975376.raw

**Does Not Comply  
Corrected Diskette Needed**

3 <110> APPLICANT: Mirkin, Chad A.  
 4 Letsinger, Robert L.  
 5 Mucic, Robert C.  
 6 Storhoff, James J.  
 7 Elghanian, Robert  
 8 Taton, Thomas A.  
 10 <120> TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO  
 11 AND USES THEREFOR  
 13 <130> FILE REFERENCE: 00-713-i12  
 15 <140> CURRENT APPLICATION NUMBER: 09/975,376  
 16 <141> CURRENT FILING DATE: 2001-10-11  
 18 <150> PRIOR APPLICATION NUMBER: 09/603,830  
 19 <151> PRIOR FILING DATE: 2000-06-26  
 21 <150> PRIOR APPLICATION NUMBER: 09/344,667  
 22 <151> PRIOR FILING DATE: 1999-06-25  
 24 <150> PRIOR APPLICATION NUMBER: 09/240,755  
 25 <151> PRIOR FILING DATE: 1999-01-29  
 27 <150> PRIOR APPLICATION NUMBER: PCT/US97/12783  
 28 <151> PRIOR FILING DATE: 1997-07-21  
 30 <150> PRIOR APPLICATION NUMBER: 60/031,809  
 31 <151> PRIOR FILING DATE: 1996-07-29  
 33 <150> PRIOR APPLICATION NUMBER: 60/200,161  
 34 <151> PRIOR FILING DATE: 2000-04-26  
 36 <160> NUMBER OF SEQ ID NOS: 64  
 38 <170> SOFTWARE: Microsoft Word 2000

## ERRORED SEQUENCES

763 <210> SEQ ID NO: 57  
 764 <211> LENGTH: 12  
 765 <212> TYPE: DNA  
 766 <213> ORGANISM: Anthrax  
 768 <400> SEQUENCE: 57

E--&gt; 769 taacaatnat cc

12

All 'n' must be explained in feature,  
 numeric identifiers <220> - <223>. See item # 9  
 on Error Summary Sheet.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/975,376

DATE: 03/04/2002

TIME: 14:54:57

Input Set : A:\00-713-112seq list.txt

Output Set: N:\CRF3\03042002\I975376.raw

L:769 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:57